

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/675,852)
In re application of: HEARD, Jacqueline, E. *et al.*)
Filed: 09/30/2003)
Art Unit: 1638)
Examiner: KRUSE, David H.)
Docket No. MBI-0022CIP)
Customer No. 47550)

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.131 OF LUC ADAM

I, Luc Adam, declare:

1. I received my Bachelor's degree and Ph.D. from Laval University, Ville de Québec (Québec) Canada. I was a post-doctoral fellow at both the NRC Plant Biotechnology Institute in Saskatoon, Saskatchewan and then at the Carnegie Institution of Washington, Department of Plant Biology, at Stanford University. I joined Mendel Biotechnology, Inc. in 1997 where I was a Project Lead in screening large collection of T-DNA mutagenized plants until about 2001. In this declaration, I serve as an expert witness in that my work has involved the isolation and characterization of mutants in genes regulating important polygenic traits related to developmental biology, as well as in biotic or abiotic stress responses in plants. This declaration is being drafted as part of my normal duties to support research and intellectual property at Mendel Biotechnology, Inc. As compensation for employment at Mendel Biotechnology, Inc., I receive salary, benefits and stock options.
2. I understand this application pertains to transgenic plants transformed with G482, SEQ ID NOs: 3 and 4, and related sequences. I also understand that the methods include using the claimed polynucleotides and polypeptides to produce a transgenic plant having an altered trait, including greater tolerance to salt relative to the wild-type plant.

3. Between November, 1997 and January 2001, my role at Mendel Biotechnology included leading the active screening of a collection of insertion mutagenized plants for the purpose of identifying mutant plant lines with altered expression of targeted transcription factors due to the insertion of foreign DNA within the transcribed sequence or in the proximal regulatory region of genes of interest. Identifying these genes was one of the first steps toward identification of transcription factors and the production of transformed plants.

The Microsoft Excel file "Oligo_G482.pdf" is a filtered output of sequences derived from our database that lists oligonucleotides used for designing primers and screening for transcription factors in *Arabidopsis*. The first entries, oligonucleotides O211, O212, O884, O2190, O2189, O1205, O2781, O3114, and O3113, correspond to primer sequences for amplifying the G482 DNA sequence, and have database entry dates prior to July 10, 1998.

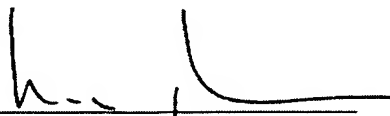
Oligonucleotides O3113 and O3114 also appear in the Excel file "la.xls", which also lists oligonucleotides used for designing primers and screening for transcription factors in *Arabidopsis*. O3113 and O3114 are the fourth and fifth entries on the page shown, and have entry dates of June 23, 1998.

The Excel file "12000 annotated ESTs.xls", which was generated on April 26, 1998, includes an entry for NCBI accession no. N97233, the eleventh entry on the attached page. N97233 corresponds to the mRNA sequence for Lambda-PRL2 *Arabidopsis thaliana* cDNA clone 247D4T7, and encodes part of the G482 sequence, including the n-terminus.

This research was conducted to identify genes of interest in advance of their ectopic expression in transgenic plants.

4. I hereby declare that all statements made herein are true and that they are based on my own knowledge, information and belief. These statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issued from it.

Date: July 27, 2009



Luc J. Adam, Ph.D.
Mendel Biotechnology, Inc.

LJA/jml
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| OL ID | GENE | OL SEQUENCE | CHANGE DATE | SUPPLIER |
|--------|------|--|-------------|----------|
| O211 | G482 | CAGCCTCAAAATCTAAACCCCTTAATGC | 12/3/97 | Operon |
| O212 | G482 | CTCCAAGAGAGCAAGACAGGTTCTTG | 12/3/97 | Operon |
| O884 | G482 | CCAACACCAATGTTGTTCTATCATG | 3/2/98 | Operon |
| O2190 | G482 | CAAGCACACTTGATCTTCTTTACACAGCCTC | 4/15/98 | Operon |
| O2189 | G482 | GGAGACGATTGCTCTGGCTATGACTAC | 4/15/98 | Operon |
| O1205 | G482 | CAGAGAGATCCACTTACCAATCT | 5/6/98 | Operon |
| O2781 | G482 | CGCCAAGATCTCTAAAGATGCCAAAGAGAC | 5/20/98 | Operon |
| O3114 | G482 | ACATCACCAACACCAATGTTCTTCTATCAC | 6/23/98 | Operon |
| O3113 | G482 | ACAAGCACACTTGATCTTCTTTACACAGCC | 6/23/98 | Operon |
| O4368 | G482 | ACATCACCAACACCAATGTTCTTCTATCAC | 7/28/98 | Operon |
| O4367 | G482 | CAAGCACACTTGATCTTCTTTACACAGCCTC | 7/28/98 | Operon |
| O4366 | G482 | CTAAAGATGCCAAAGAGACGATGCAGGAG | 7/28/98 | Operon |
| O4365 | G482 | CAACGCCAAGATCTCTAAAGATGCCAAAG | 7/28/98 | Operon |
| O5259 | G482 | GATCTTGGCGTTGGCGGCAAGG | 8/27/98 | Operon |
| O5258 | G482 | GAACCTGGAGACACACTCCTGCATC | 8/27/98 | Operon |
| O28570 | G482 | CTTCAGTCTTCCCACTCAAGTCAACCACCA | 5/16/00 | MGW |
| O44190 | G482 | GGGAAAGCGGCCGCGGAGCAAGACAGGTTCTTACCGATCGCTAAGC | 9/16/02 | MWG |
| O46013 | G482 | CATCAGTTTCTTACCAGCAGAAC | 3/20/03 | MWG |
| O47240 | G482 | ATACAGAGAGATCCACTTCACCAATC | 7/31/03 | MWG |
| O47239 | G482 | ATACCAGCCGACACTTAACAATTACAC | 7/31/03 | MWG |
| O47717 | G482 | AATCTTTGTTAAGTCTTGTCTTACC | 9/17/03 | MWG |
| O47704 | G482 | GTATCACCAACATCATCAGTTTCTTC | 9/17/03 | MWG |
| O49391 | G482 | CGATCTCCCTAAACCTCTGCAA | 7/9/04 | MWG |
| O49380 | G482 | TCACCGGAGAAAGCATCTGATAA | 7/9/04 | MWG |
| O49820 | G482 | GGGAAAGCGGCCGCAAGTCTTGTCTACCGAGGCAGCTC | 9/7/04 | MWG |
| O49819 | G482 | GCACGCGTCGACATGGGGATTCGACAGGATTCCG | 9/7/04 | MWG |
| O50197 | G482 | GGGAAAGCGGCCGCGAGTCTTGTCTACCGAGGCAGCTCCACCTC | 12/1/04 | MWG |
| O51246 | G482 | GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC | 7/27/05 | Sigma |
| O51391 | G482 | GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC | 8/18/05 | Sigma |
| O51596 | G482 | ATAAGAAATCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC | 9/13/05 | Sigma |
| O51738 | G482 | GGGAAAGCGGCCGCTTCTGAAAAATTACAAGGAATAAAAAATAAAC | 11/2/05 | Operon |
| O53960 | G482 | CTGGTGAAGAAACTGATGTTGG | 5/7/07 | IDT |
| O53959 | G482 | CTAGGGAGGCCACAGACTGGTG | 5/7/07 | IDT |
| O59896 | G482 | CCAACACCAATGTTCTTCTATCATG | 10/12/07 | IDT |
| O59895 | G482 | ATACCGCCGACACTTAACAATTACAC | 10/12/07 | IDT |

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|-------|------|-----|----------|--|---|-----------|
| O3110 | G470 | 62 | 1 3'-end | 1363 CTGGACAAATGAAGGATTTGATGCAGACTTG | 3 | 6/23/1998 |
| O3111 | G307 | 71 | 1 3'-end | 1986 AAACGGTCGATTCAGTTCGGTTAGTGC | 3 | 6/23/1998 |
| O3112 | G307 | 71 | 1 3'-end | 1930 TCCACTGATCTCAATCTCAAATTCACCTCGAC | 3 | 6/23/1998 |
| O3113 | G482 | 74 | 1 3'-end | 725 ACAAGCACACTTGATCTTCTTTACACAGCC | 3 | 6/23/1998 |
| O3114 | G482 | 74 | 1 3'-end | 660 ACATCACCAACACCAATGTTCTGTTCTATCAC | 3 | 6/23/1998 |
| O3115 | | 89 | 1 3'-end | 1926 TTGTTCAACACAATCTCGAACTCACTTGTCTC | 3 | 6/23/1998 |
| O3116 | | 89 | 1 3'-end | 1895 TTGTCCTCTTCCCTCTTCTTCTTCATCG | 3 | 6/23/1998 |
| O3117 | G143 | 223 | 1 3'-end | 1012 CCAAGATATGAATCTTTGTTCTTAAGACGC | 3 | 6/23/1998 |
| O3118 | G143 | 223 | 1 3'-end | 967 AGCTTACGTACATACGTCTCGACAAACGGAG | 3 | 6/23/1998 |
| O3119 | G136 | 224 | 1 3'-end | 722 TACACAAGTTGAAGAGGAGGTTGGTCTTGG | 3 | 6/23/1998 |
| O3120 | G136 | 224 | 1 3'-end | 677 TTCGGTTCAAGAAGGTTCAACCGGAATATAG | 3 | 6/23/1998 |
| O3121 | G146 | 234 | 1 3'-end | 860 CTAGAGTATGCTTAATCATTAACACAACACA | 3 | 6/23/1998 |
| O3122 | G146 | 234 | 1 3'-end | 829 AATTGCAATGAGTCTTGAAGGACCAATACC | 3 | 6/23/1998 |
| O3123 | G218 | 271 | 1 3'-end | 2350 TTTATGTGGACAGGACATTTGGTTATGTTGG | 3 | 6/23/1998 |
| O3124 | G218 | 271 | 1 3'-end | 2230 TGCTACTCTCTAAACCGCTTCTCAGCCAAG | 3 | 6/23/1998 |
| O3125 | G221 | 275 | 1 3'-end | 586 GAGAATAAGTCTCCATCGCTTGATCTTGTTG | 3 | 6/23/1998 |
| O3126 | G221 | 275 | 1 3'-end | 527 GCAGCTTGATCGTTGATCTCTGAGCTAT | 3 | 6/23/1998 |
| O3127 | G240 | 297 | 1 3'-end | 2154 ACCATTAAACGTCCAAGAAATCGGAAATATC | 3 | 6/23/1998 |
| O3128 | G240 | 297 | 1 3'-end | 2134 CGGAAATATCAAACTTCATGAGATTACTGC | 3 | 6/23/1998 |
| O3129 | G287 | 355 | 1 5'-end | 86300 GAAATAGCAACTCCAGCTCAAGTCAATTCG | 3 | 6/23/1998 |
| O3130 | G287 | 355 | 1 5'-end | 86230 GTTTCTCTCATAGAGTGCTTGTGAGCTTGG | 3 | 6/23/1998 |
| O3131 | G336 | 391 | 1 3'-end | 2227 GGCCATACCATCTTCTTCATATCTTGCGC | 3 | 6/23/1998 |
| O3132 | G336 | 391 | 1 3'-end | 2208 TATCTTGTGGCTGCTTGATTGAACTGAAAG | 3 | 6/23/1998 |
| O3133 | G320 | 392 | 1 3'-end | 102668 CAGCGATGATGGAGATGTTCTTCAGATAG | 3 | 6/23/1998 |
| O3134 | G320 | 392 | 1 3'-end | 102589 TTGTAACATCTTTCACGAAGACGAAGACG | 3 | 6/23/1998 |
| O3135 | G339 | 393 | 1 3'-end | 14148 TGTGTCGGAGAATCCTCTTGACATAACTC | 3 | 6/23/1998 |
| O3136 | G339 | 393 | 1 3'-end | 14076 CTGATTGCGAACAGTCTGCTCCATAATTC | 3 | 6/23/1998 |
| O3137 | G362 | 427 | 1 3'-end | 656 GTACATATAATCTTAATCATATATCTCTC | 3 | 6/23/1998 |
| O3138 | G362 | 427 | 1 3'-end | 632 CTCTCTTTAATTTGTTATGCCGCATCTCCG | 3 | 6/23/1998 |
| O3139 | G546 | 450 | 1 5'-end | 77294 GCAATGACTCGACCGTCAAGATTACTTGAGAC | 3 | 6/23/1998 |
| O3140 | G546 | 450 | 1 5'-end | 77211 ATGGTGGTGATCTTGTGCGCTCTTCTTTG | 3 | 6/23/1998 |
| O3141 | | 452 | 1 3'-end | 3032 TCATCTCTTAGTCGACTTCTCCATCTTGC | 3 | 6/23/1998 |
| O3142 | | 452 | 1 3'-end | 2990 CAACTCAGGCATATCACCATCTTCCCTCAAC | 3 | 6/23/1998 |
| O3143 | | 453 | 1 3'-end | 2335 AGACAGACCCACCCACACGATATAACAGACC | 3 | 6/23/1998 |
| O3144 | | 453 | 1 3'-end | 2312 ACAGACCTGACACAAACCCCAACCTAGAAG | 3 | 6/23/1998 |
| O3145 | | 458 | 1 3'-end | 1033 TGGTTTGAAGAAATTAGTGTGAGTACCAGC | 3 | 6/23/1998 |
| O3146 | | 458 | 1 3'-end | 1003 ATAGCAACATTGCAGATTGTGCGAACAATGC | 3 | 6/23/1998 |

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| C-1-TETRAHYDROFOLATE SYNTHASE, CYTOPLASMIC (METHYLENETETRAHYDROFOLATE DEHYDROGENASE / METHENYL TETRAH) | | | |
| C25G4.2 [Caenorhabditis elegans] | 19 C-2 | 111L3T7 | T42307 |
| C34B7.2 [Caenorhabditis elegans] | 21 D-3 | 114I24T7 | T43002 |
| C34D4.4 gene product [Caenorhabditis elegans] | 58 E-12 | 194J15T7 | H76431 |
| C-4 STEROL METHYL OXIDASE | 74 B-12 | 224L9T7 | N65281 |
| C-4 STEROL METHYL OXIDASE | 52 B-1 | 182J14T7 | H37509 |
| C54G4.7 [Caenorhabditis elegans] | 83 A-9 | 241A21T7 | N65676 |
| Ca2+-ATPase | 92 F-2 | 249E7T7 | W43274 |
| Ca2+-transporting ATPase (EC 3.6.1.38) PMCA3 - rat | 105 D-7 | E8H6T7 | AA042787 |
| CAATT-box DNA binding protein subunit B | 83 D-1 | G3A12T7 | N96705 |
| CAATT-box DNA binding protein subunit B | 2 F-3 | 77G8T7 | T45165 |
| cabbage imbibition protein | 91 E-5 | 247D4T7 | N97233 |
| cabbage imbibition protein | 25 G-12 | 125L9T7 | T44838 |
| cabbage imbibition protein | 32 F-3 | 147O13T7 | T75887 |
| cabbage imbibition protein | 36 F-7 | 156M7T7 | T88469 |
| cabbage imbibition protein | 54 G-1 | 186E21T7 | R89919 |
| cabbage imbibition protein | 62 C-2 | 201L7T7 | H77011 |
| cabbage imbibition protein | 75 E-8 | 226L19T7 | N65069 |
| cabbage imbibition protein | 88 F-4 | 242F2T7 | N96982 |
| cabbage imbibition protein | 91 H-3 | 246I17T7 | N97213 |
| cabbage imbibition protein | 96 B-8 | 248A12T7 | W43044 |
| cabbage imbibition protein | 121 D-6 | 94L12T7 | T21047 |
| cabbage imbibition protein | 125 C-9 | 94L12T7 | T21047 |
| cadmium-induced protein | 30 D-10 | 142G24T7 | T76090 |
| cadmium-induced protein | 122 E-1 | 120H10T7 | T43419 |
| cadmium-induced protein - Arabidopsis thaliana | 86 A-12 | G8D8T7 | N96325 |
| CADMIUM-INDUCED PROTEIN AS30. | 20 C-8 | 114A12T7 | T42544 |
| CADMIUM-INDUCED PROTEIN AS30. | 27 E-1 | 132C14T7 | T45770 |
| CADMIUM-INDUCED PROTEIN AS30. | 27 E-7 | 131F22T7 | T45712 |
| CADMIUM-INDUCED PROTEIN AS30. | 38 D-7 | 160F5T7 | T88298 |
| CADMIUM-INDUCED PROTEIN AS30. | 53 G-3 | 185C24T7 | H37693 |
| CADMIUM-INDUCED PROTEIN AS30. | 54 G-2 | 186E23T7 | R89920 |
| CADMIUM-INDUCED PROTEIN AS30. | 76 G-8 | 227N9T7 | N65389 |
| CADMIUM-INDUCED PROTEIN AS30. | 77 A-9 | 230D21T7 | N65486 |
| CADMIUM-INDUCED PROTEIN AS30. | 85 D-4 | 241E13T7 | N97284 |
| CADMIUM-INDUCED PROTEIN AS30. | 100 F-6 | E3A6T7 | AA042140 |
| CADMIUM-INDUCED PROTEIN AS30. | 103 B-4 | E8B8T7 | AA042303 |
| cadmium-resistance protein | 15 E-11 | 107J19T7 | T22571 |
| Caenorhabditis elegans cosmid F56C9 [Caenorhabditis elegans] | 115 E-9 | 250G2T7 | W43358 |
| caffeic acid 3-O-methyltransferase | 43 C-5 | 167P12T7 | R65224 |
| caffeic acid 3-O-methyltransferase | 46 C-2 | 173I7T7 | H36487 |
| CAFFEIC ACID 3-O-METHYLTRANSFERASE (S-ADENOSYLS-L-METHIONINE:CAFFEIC ACID 3-O-METHYLTRANSFERASE) (CO | 78 A-6 | F5B6T7 | N96542 |
| caffeic acid/5-hydroxyferulic acid O-methyltransferase | 19 A-9 | 111G11T7 | T42255 |
| caffeoyl-CoA O-methyltransferase | 36 A-9 | 154J19T7 | T88356 |
| CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT) | 25 D-3 | 125A9T7 | T44276 |
| CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT) | 23 A-11 | 120J2T7 | T43508 |
| CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT) | 106 G-2 | E12B7T7 | AA042641 |
| CAFFEYOYL-COA O-METHYLTRANSFERASE (TRANS-CAFFEYOYL-COA 3-O-METHYLTRANSFERASE) (CCOAMT) | 113 A-5 | 132K23T7 | R84053 |